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EXAMINER

CLARK, MAXWELL A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/822,439	Applicant(s) OWENS ET AL.	
	Examiner MAXWELL A. CLARK	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 7/1/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/1/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 13 have been fully considered and are persuasive. The objection of claim 13 has been withdrawn. Additionally, the double patenting rejection of claims 9-11 has been withdrawn.
2. Applicant's arguments with respect to prior art rejections of claims 9-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 9 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. The terms "temporary" and "until" in claims 9 and 11 are relative terms which renders the claim indefinite. The terms "temporary" and "until" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Providing temporary telecommunications service over a temporary radio link until permanent optical or copper plants are deployed has been rendered indefinite by the use of the terms "temporary" and "until." purpose
6. Regarding claims 9 and 11, the phrase "whereupon the radio interface unit and the digital interface "may be" removed" renders the claims indefinite because it is

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unclear whether the limitation(s) following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

7. Claim 10 recites the limitation "the subscriber side interface" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper (USPN 6,181,710 B1) in view of Fairfield et al. (USPN 6,259,910 B1).

Regarding claim 9, Cooper discloses a system for providing telecommunications service to telecommunications users in a service area, the system comprising: an office-side radio interface unit (Fig. 8, illustrated as the radio carrying element 230); a digital interface unit coupled to the radio interface unit (col. 10 lines 29-30 wherein the access concentrator corresponds to the digital interface unit coupled to the radio interface unit

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and col. 4, lines 18-24 wherein the switch is located in the central office, i.e. office side); a digital signal cross-connect coupled to the digital interface unit (col. 12, lines 11-14 and illustrated in fig. 10 elements 150 and 390); a digital loop carrier (col. 9 lines 43-45 wherein the loop carrier corresponds to the wireless local loop. It is inherent that the wireless local loop is a digital local loop since the wireless technology being used is code division multiple access technique, hence digital); and a subscriber area interface configured for communication with the telecommunications users (col. 14, lines 23-27 and illustrated in fig. 16 and fig. 17 as elements 160 and 170). Cooper discloses the system finds a wide variety of possible applications, for example in rural, remote, or sparsely populated areas where the cost of laying permanent wire or optical networks would be too expensive, in heavily built-up areas where conventional wired systems are at full capacity or the cost of laying such systems would involve too much interruption to the existing infrastructure, col. 1, lines 38-44. Cooper does not expressly disclose wherein the radio interface unit and the digital interface unit are removable and are configured to provide temporary telecommunications service over a temporary radio link until permanent optical or copper plants are deployed, whereupon the radio interface unit and the digital interface unit may be removed and replaced with a fiber optic cross connect or a digital distribution point when the permanent optical or copper plants are deployed. However, Fairfield discloses permanent optical or copper plants that are deployed, col. 1, lines 60-64, wherein the wirelines 102-1 and 102-3, see fig. 2, can be fabricated inexpensively and easily installed and removable radios for the purpose of centralizing functionality, col. 1, lines 66-67. It would have been obvious to of ordinary

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skill in the art at the time of the application to include removable radios when the cost of cost of laying permanent wire or optical networks becomes justified as the rural areas increase in population.

Regarding claim 10, Cooper discloses the subscriber side interface comprises a subscriber-side radio interface unit for radio communication with the telecommunications users (col. 14, lines 23-27 and illustrated in fig. 16 and fig. 17 as elements 160 and 170).

Regarding claim 11, Cooper discloses a system for providing telecommunications service to telecommunications users in a service area, the system comprising: an office-side connection arranged for communication with a central office (fig. 16 and 17, illustrated as the back haul network), the office- side connection including a first radio interface unit which communicates a first radio signal (fig. 16 and 17, illustrated as the back haul network), including a plurality of voice channels for communication between the central office and a plurality of subscribers in the service area (fig. 16 and 17, illustrated as the V5.2 interfaces); and a subscriber-side connection arranged for communication with a telecommunication subscriber (fig. 16 and 17, illustrated as the connection between element 160 and elements 170), the subscriber-side connection including a second radio interface unit (fig. 16 and 17, illustrated as the connection between element 160 and elements 170) which communicates a second radio signal including a single voice channel for communication between the central office and a single subscriber in the service area(fig. 16 and 17, illustrated as the connection between element 160 and elements 170). Cooper

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discloses the system finds a wide variety of possible applications, for example in rural, remote, or sparsely populated areas where the cost of laying permanent wire or optical networks would be too expensive, in heavily built-up areas where conventional wired systems are at full capacity or the cost of laying such systems would involve too much interruption to the existing infrastructure, col. 1, lines 38-44. Cooper does not expressly disclose wherein the radio interface unit and the digital interface unit are removable and are configured to provide temporary telecommunications service over a temporary radio link until permanent optical or copper plants are deployed, whereupon the radio interface unit and the digital interface unit may be removed and replaced with a fiber optic cross connect or a digital distribution point when the permanent optical or copper plants are deployed. However, Fairfield discloses permanent optical or copper plants that are deployed, col. 1, lines 60-64, wherein the wirelines 102-1 and 102-3, see fig. 2, can be fabricated inexpensively and easily installed and removable radios for the purpose of centralizing functionality, col. 1, lines 66-67. It would have been obvious to of ordinary skill in the art at the time of the application to include removable radios when the cost of cost of laying permanent wire or optical networks becomes justified as the rural areas increase in population.

Regarding claim 12, Cooper discloses a multiplexer coupled with the first radio interface unit and the second radio interface unit and which separates the single voice channel for the single subscriber from the plurality of voice channels (col. 3 and 4, lines 53-67 and 1-4 respectively).

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11. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper (USPN 6,181,710 B1) in view of Salas (USPN 5,924,018).

Regarding claims 13 and 14, Cooper illustrates the multiplexer as a five to one used for muxing and demuxing of signals from V5.1, unconcentrated signals, commonly used for subscribers in the PSTN (col.2, lines 39-42) to V5.2, concentrated signals (fig. 9, illustrated as element 320, wherein the five to one mux can be used as a three to one mux by not using the 4th and 5th inputs). Cooper does not expressly disclose the first radio signal / interface unit comprising a DS3 radio signal / radio and the second radio signal / interface unit comprising a DS1 radio signal / radio. However, Cooper discloses each subscriber terminal (fig. 14, ST-170) supporting 4x32Kbit signal ADPCM signal which requires the radio signal / interface unit between (fig. 14, 170) and (fig. 14, 160) to support at least 128kbit. A DS0 radio signal / interface unit can only support 64kbit leaving the next lowest cost radio signal / interface unit available a DS1 radio signal / interface. Additionally, the PT-PT radio is illustrated as supporting at least 8xV5.2 interfaces (fig. 17), i.e. 16Mbit, which cannot be supported by DS1 radio signal / interface, i.e. 1.544Mbit, leaving the next lowest cost radio signal / interface unit available a DS3 radio signal / interface which can support the illustrated 8xV5.2 interfaces (fig. 17). However, Salas discloses DS1 and DS3, col. 5, lines 50-55, for the purpose of converting between DS3 and DS1 digital signals and analog voice channels. It would have been obvious to one skilled in the art at the time of the application to modify Cooper to include the first radio signal / interface unit comprising a DS3 radio signal / radio and the second radio signal / interface unit comprising a DS1 radio signal /

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radio for the purpose of supporting the data rates that the radio signal / interfaces are required to support at an economical value and for the purpose of converting between DS3 and DS1 digital signals and analog voice channels.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Katko (USPN 6,223,054 B1), Sellin; Derek et al. (US 6,977,916 B1), Priest; Mark D. et al. (US 6,047,160 A1), Owens; Michael Kevin et al. (US 6,415,150 B1), Owens; Michael Kevin et al. (US 6,788,942 B2), Owens, Michael Kevin et al. (US 2004/0264446 A1), Myers; William K. et al. (US 6,304,762 B1), Lechner; Robert et al. (US 5,274,694 A1), Katko; Mark G (US 6,223,054 B1).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAXWELL A. CLARK whose telephone number is (571) 270-1956. The examiner can normally be reached on Monday through Thursday 7:30A.M. to 5P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 14, 2008

/Maxwell A. Clark/
Examiner, Art Unit 2416

/Kwang B. Yao/
Supervisory Patent Examiner, Art Unit 2416